

ENVIRONMENTAL DISCLOSURE PRACTICES: A NEO INSTITUTIONAL THEORY PERSPECTIVE ACROSS INDUSTRIES

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Abstrak

Isu lingkungan hidup menjadi salah satu topik yang dibahas dalam konferensi internasional sejak Stockholm 1972 hingga Stockholm 2022. Indonesia ikut serta dalam peningkatan kinerja keberlanjutan, sehingga pembuatan regulasi dan kebijakan terkait isu lingkungan hidup sangat diperlukan bagi perusahaan yang beroperasi di Indonesia. Penelitian ini mengkaji pengungkapan lingkungan berdasarkan jenis industri (model 1) dan mengkaji pengungkapan lingkungan sebelum dan sesudah terbitnya peraturan terkait pelaporan keberlanjutan (model 2). Data yang digunakan adalah perusahaan pertambangan dan manufaktur yang terdaftar di Bursa Efek Indonesia tahun 2020-2021. Hasil penelitian membuktikan bahwa terdapat perbedaan risiko lingkungan antara perusahaan pertambangan, perusahaan high profile dan low profile. Selain itu, terdapat perbedaan skor pengungkapan lingkungan hidup sebelum dan sesudah terbitnya peraturan tersebut. Temuan ini memperkuat teori Neo-Institusional yang menyatakan bahwa regulator dapat memberikan tekanan pada suatu institusi.

Kata Kunci: Pengungkapan Lingkungan, Jenis Industri, Teori Neo-Institusional

Abstract

Environmental issues have been one of the topics discussed at international conferences since Stockholm 1972 to Stockholm 2022. Indonesia is participating in the improvement of sustainability performance, so the creation of regulations and policies related to environmental issues is necessary for companies operating in Indonesia. This research examines environmental disclosure based on industry type (model 1) and examines environmental disclosure before and after the issuance of regulations related to sustainability reporting (model 2). The data used are mining and manufacturing companies listed on the Indonesia Stock Exchange in 2020-2021. The results of the study prove that there are differences in environmental risks between mining, high-profile and low-profile manufacturers. Furthermore, there are differences in environmental disclosure scores before and after the issuance of these regulations. These findings enhance the Neo-Institutional theory that regulators can exert pressure on an institution.

Keywords: Environmental Disclosure, Type of Industry, Neo-Institutional Theory

Introduction

It is clear that environmental issues are a concern for various fields, including accounting, social, economy, and academics. Indeed, international organisations and academics are focusing on these issues (Shoeb et al., 2022). Furthermore, the main topic of International Conferences has been discussed from 1972 to 2022, with various locations and dates (United Nation, 2023). It is also clear that this issue is of concern to investors. Investment is going towards sustainable development firms based on a company's disclosure of its environmental and social impacts (Bolognesi & Burchi, 2023). Policy regarding the environment can increase interest in investors to invest in the companies (Ahmad et al., 2023).

The study reveals clear differences in environmental disclosure levels between low-profile manufacturing and mining companies, based on industry type comparison. Mining firms are more likely to cause environmental damage than corporations in other sectors of industry (Khanifah et al., 2020). This makes it likely that investors will respond to the environmental performance of mining companies. This is also reflected in Sayuti et al. (2020) study, where mining companies have the highest disclosure of biodiversity issues. The industrial sector in Indonesia is responsible for a significant portion of greenhouse gas emissions, contributing 29% of total emissions. Transportation, land use, forests, energy supply, housing, agriculture, and office are also major contributors.

Researchers conduct diverse environmental studies across sectors, highlighting unique challenges in each sector. Mining companies focus on biodiversity, while the manufacturing industry has higher emissions issues (Sayuti et al., 2020). This research analyses differences in environmental disclosure based on industry type, sub-environmental disclosure (emissions and biodiversity), and differences in 2020 and 2021, considering regulations promoting annual reporting of environmental and social issues. This research tests neo-institutional theory, which asserts that businesses must align their current procedures with established structures and rules within a specific field (DiMaggio & Powell, 1983) in (Gerged et al., 2021). Some have researched sub-indexes of environmental disclosure, such as policy, pollution, energy, and financial issues (Gerged et al., 2021). This research differs from previous studies in several ways. Firstly, it compares sub-indices based on industry type. Secondly, it uses a neo-institutional theory approach. Thirdly, it examines differences in environmental disclosure in 2020 compared to 2021 using panel data from mining, high-profile, and low-profile industries. This research used a paired sample t-test and one-way ANOVA with 408 participants. The chapter covers literature reviews, research methods, results, discussion, and conclusions.

Neo-Institutional Theory

Neo-institutional theory provides a comprehensive understanding of corporate environmental disclosure. It addresses how businesses respond to various constraints (Gerged et al., 2021). The theory also addresses the mechanisms by which structures, including schemes, regulations, norms, and routines, get established as authoritative directions for social conduct (Bello et al., 2021). Neo-institutional theory explains how the pressure from stakeholders influences a company's decisions (Rudyanto, 2019).

This research follows Carrasco & Vílchez (2022), which issues sustainability as an isomorphic mimetic. Sustainability is a complex issue that can be interpreted as both internal and external activities, influencing a company's processes and gaining legitimacy from stakeholders Carrasco & Vílchez, 2022). This

research categorises the position of environmental disclosure as isomorphic mimetic follow (Gerged et al., 2021). They found that voluntary corporate environmental disclosure in the region is influenced by government environmental activities and NGO initiatives, leading to increased disclosure and enhanced corporate reputation, which ultimately increases the market value of companies through mimetic isomorphism. Rudyanto (2019) makes a compelling case that investors are understandably cautious about sustainability reports, given that Indonesian corporations are creating them using mimetic force.

Neo-institutional theory is also used by research Haque & Ntim (2022), which discusses environmental issues. There is no doubt that neo-institutional theory's efficiency-oriented justifications are supported by evidence showing organisations engage in sustainability initiatives, such as reduced emissions, environmental innovations, and resource efficiency, in response to climate-related risks. This, in turn, supports the organisations' efforts to reduce greenhouse gas emissions and enhance their corporate carbon performance (Haque & Ntim, 2022). Furthermore, Gerged et al. (2021) make a compelling case that firm value is being enhanced by managers enhancing their environmental disclosure programmes and meeting the needs of influential individuals.

In summary, neo-institutional theory explores the influence of stakeholders on companies' decision-making, particularly in relation to corporate environmental disclosure following regulations from the Financial Service Authority. Furthermore, environmental disclosure has different levels between industry types, such as high-profile and low-profile (Milne & Hackston, 1996; Suttipun & Yordudom, 2022). It is important to examine whether this regulation has had an impact on the differences observed previously. After all, environmental issues are of concern to investors and can affect firm value (Gerged et al., 2021). The proposed actions are expected to prompt companies to address environmental concerns related to their operations, thus forming an isomorphic mimetic.

Empirical literature and Hypotheses Development

Recent study compares the level of environmental disclosure of the mining industry, high-profile and low-profile manufactures. High-profile industry contributes around 40% of total carbon emissions in Indonesia (Hardiyansah et al., 2021). Meanwhile, the mining industry in Indonesia is subject to regulations like Minister of Energy and Mineral Resources Regulation No. 16 of 2021, which impact natural terrain, land conversion, forest habitat disturbance, and biodiversity (Khanifah et al., 2020). This will undoubtedly influence the level of pressure from regulators on the mining industry regarding environmental policy. Mining companies, like the oil and gas sector, present more environmental issues because they have a high level of environmental risk (Garner & Lacina, 2019).

The relationship between increased transparency regarding the environment and vulnerability to environmental risk (laws, prohibitions, and natural disasters) is up for debate (Garner & Lacina, 2019). Furthermore, there is a debate about whether low-profile companies should increase environmental disclosure due to the impact on firm value (Gerged et al., 2021) and the high real costs associated with system construction, information identification, measurement, and reporting (Deswanto & Siregar, 2018). Low-profile operations are different from mining or agricultural companies. The two industries' businesses are closely tied to nature, and the environment has a direct impact on their circumstances. This means that an increasing number of environmental issues must be disclosed by these businesses (Deswanto & Siregar, 2018). Furthermore, stakeholders put more pressure on high-profile industries than low-profile industries (Hardiyansah et al., 2021). Consequently, low-profile industries are not under the same pressure to boost environmental disclosure as high-profile companies.

The government must take the lead in enhancing environmental disclosure in public companies in Indonesia. Global nations are implementing carbon laws and promoting low-carbon economies to limit global temperature rise to 2°C (Shu et al., 2023). In developing

nations like China, the government must establish regulations and laws to address environmental issues (Tu et al., 2020). Businesses are legally obliged to make a significant contribution to environmental protection through regulations (Deswanto & Siregar, 2018).

Indonesia's government has established regulations on environmental issues, including Law No. 40/2007, 32/2009, and 47/2012. OJK 16/SEOJK.04/2021 determines the format and content of public company annual reports, promoting environmental disclosure. The OJK, established under Law no. 21/2011, ensures a sustainable financial system by supervising public companies on the Indonesia Stock Exchange. The instrumental perspective of neo-institutional theory asserts that economic organisations must compete for vital resources to safeguard shareholder interests and enhance company performance due to institutional forces that are normative, cognitive, and regulatory (Aguilera et al., 2007) in (Ntim & Soobaroyen, 2013). Isoform is a concept that describes a phenomenon where a population is constrained by units that look like other units in the same environment (DiMaggio & Powell, 1983). Neo-institutional theory predicts that Indonesian public companies will respond to OJK regulations by presenting environmental issues in reports for high-profile and low-profile companies.

H1: There are differences in environmental disclosure, emission, biodiversity based on type of industry

H2: There are differences in environmental disclosure before and after the issuance of environmental issue regulations

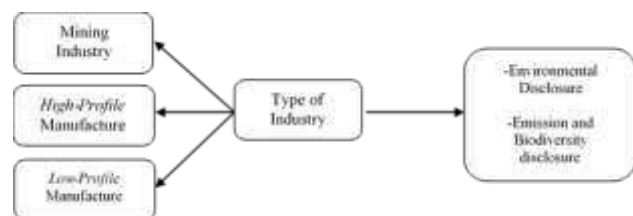


Figure 1: Conceptual Framework of Model 1
Source: Self Proceed

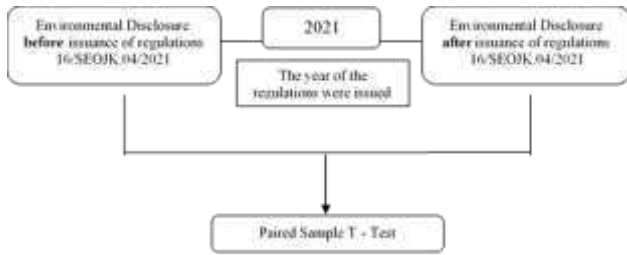


Figure 2 : Conceptual Framework of Model 2
Source: Self Proceed

Methodology

Sample

This research focuses on manufacturing and mining companies listed on the Indonesia Stock Exchange, selected using purposive sampling for financial and annual reports, including sustainability reports.

Table 1: Sample Selectio

Type of industry	Population	Does not satisfy the sample criteria	Final sample	Percentage ^a
Mining	44	0	44	19,6%
High-profile	104	1	103	46%
Low-profile	78	1	77	34,4%
Total			224	100%
Observation 2 period			448	

^aThe percentages are rounded up

Measurement of Variables and Analysis Data

This study determines the type of industry by adapting the criteria used by (Milne & Hackston, 1996; Yulia & Afrianti, 2014). The GRI Standard 2016 is the best way to measure environmental disclosure. It offers clear advantages, such as usefulness for shareholders in decision-making processes

(Suttipun & Yordudom, 2022) and guidance in preparing better sustainability reports (Pereira et al., 2021). To assess environmental disclosure using content analysis, assign a 1 if the company discloses GRI Standard issues, add 1 to a total of 30, and divide by 30. Meanwhile, to measure emission and biodiversity issues, follow the total score for each issue (see Figure 3).

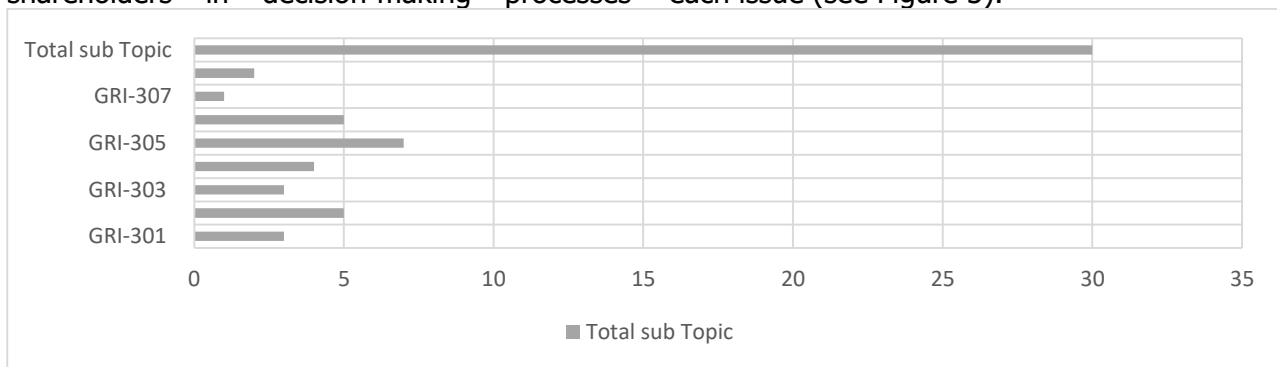


Figure 3: GRI Standards 2016
Source: Self Proceed

The content analysis of environmental disclosure using GRI Standards has several limitations in this study. These include the fact that environmental disclosure is analysed in annual, sustainability, and separate reports. The data is sourced from reporting periods and companies with GRI Standard references index. Topic GRI 307 only covers environmental performance discussions, with whistleblowing systems discussing environmental issues in complaints. The study compares environmental disclosure values between mining companies

using ANOVA analysis and paired sample t-test before and after OJK regulation 16/SEOJK.04/2021.

FINDING AND DISCUSSIONS

Descriptive Statistics

Table 2 shows environmental disclosure statistics from 448 observations, with a mean value of 0.167, higher than Deswanto & Siregar (2018) -0.0028. The maximum and minimum values are 0.0000 and 0.7667, with a median of 1.000 and a standard deviation of 0.186.

Table 2
 Descriptive Statistics of Environmental Disclosure

	Environmental Disclosure
Valid	448
Mean	.167634
Median	.100000
Std. Deviation	.1860177
Skewness	1.066
Kurtosis	.438
Minimum	.0000
Maximum	.7667

Source: Self Proceed

Hypotheses Testing Result

The study compares environmental disclosure scores using 88 mining industries, 206 high-profile manufacturers, and 154 low-profile manufacturers. Anova analysis and paired simple t-test were used, but the Kruskal-Wallis test was used due to abnormal data distribution. The Kruskal-Wallis test is also used

by (Daryaei et al., 2020) to see differences between industrial sectors. Table 3 clearly shows that there are significant differences in environmental, emission, and biodiversity disclosure across mining industry, high-profile, and low-profile manufacturers. In fact, sub-index emissions have a significant effect at the 0.01 and 0.1 level.

Table 3
 Test Statistics of Model 1: Kruskal-Wallis Test

	Environmental	Emissions	Biodiversity
Kruskal-Wallis H	13.668	5.081	59.730
Asymp. Sig.	.001***	.079*	.001***

t statistics in brackets *** p < 0,01 **p<0,05 *p<0,1

Source: Self Proceed

The data normality test for model 2 is not normally distributed, so hypothesis 2 is tested using the Wilcoxon Test. This non-parametric test examines the hypothesis that the median difference is zero for the non-parametric equivalents of the parametric one-sample (Harris & Hardin, 2013). Table 4 shows negative scores in pre-post issuance regulation

16/SEOJK.04/2021 environmental disclosure scores, with 0 indicating no decrease. The positive ranks indicate that 197 companies increased their environmental disclosure post-regulation. The 27 data points that have the same score both pre- and post-publication show that there were differences between pre- and post-regulation issuance.

Table 4
 Model 2: Wilcoxon Signed Ranks Tes

	N	Mean Rank	Sum of Ranks	Post – Pre
Post - Negative Ranks	0 ^a	.00	.00	Z
Pre Positive Ranks	197 ^b	99.00	19503.00	-12.190 ^b
Ties	27 ^c			Asymp. Sig. (2-tailed)
Total	224			<,001***

t statistics in brackets *** p < 0,01 and **p<0,5

Source: Self Proceed

Additionally Test

This study uses two models to test hypotheses about environmental disclosure in the mining industry. Model 1 reveals differences

before and after OJK regulations. Additional tests, including Bonferroni and Games-Howell tests, confirm these findings. Results show different environmental disclosure scores for high-profile and low-profile manufacturing companies.

Table 5
Additonally Test

	(I) Type_Industry	(J) Type_Industry	Sig.
Bonferroni	1.Mining	2	<,001***
		3	<,001***
	2.High-Profile	1	<,001***
		3	1.000
	3.Low-Profie	1	<,001***
		2	1.000
Games-Howell	1.Mining	2	.005**
		3	.001***
	2.High-Profile	1	.005**
		2	.666
	3.Low-Profie	1	.001***
		2	.666

Source: Self Proceed

Discussions

The study investigated differences in environmental disclosure based on industry type and before and after OJK regulation 16/SEOJK.04/2021, using Kruskal-Wallis Test and Wilcoxon Signed Ranks Test, as non-parametric tests were used to answer the hypothesis. The study reveals clear variations in environmental disclosure, emissions, and biodiversity disclosure among mining industries, high-profile, and low-profile manufacturers, based on the three types of companies. These results are supported by studies (Milne & Hackston, 1996; Suttipun & Yordudom, 2022). High-profile industries reveal more environmental and social issue information than low-profile types (Milne & Hackston, 1996). Furthermore, those operating in highly prominent industries disclose more about the environment than those in lower-profile industries (Burgwal & Vieira, 2014). This is in line with data released by the Deforestation and Forest Degradation Management Agency. Indonesia's total carbon emissions are predicted to reach 2,950 billion tons in 2020, accounting for 40% of high-profile industry sector emissions (Hardiyansah et al., 2021).

Apart from that, the mining industry has operational differences compared to

manufacturing companies. The (Saenz, 2018) study clearly shows that the mining industry causes social conflict, particularly environmental conflict. The solution is simple: address the issues. This includes waste reduction, environmental planning, green areas, eco-friendly waste handling, biodiversity offsets, funding community programmes, and forming committees for community involvement (Saenz, 2018). Therefore, the mining industry has a different impact on the environment than manufacturing companies.

The study confirms the second hypothesis, based on neo-institutional theory, which states that institutional forces, political, economic, and social, can influence the adoption of new business practices and innovations (DiMaggio & Powell, 1983) in (Ntim & Soobaroyen, 2013). The study clearly indicates that the government's role in Indonesian environmental policies can significantly influence company disclosures of environmental issues.

Conclusion

This study definitively tests and proves two main hypotheses. First, there are differences in environmental disclosure between mining, high-profile and low-profile

manufacturing companies. These results are supported by studies (Milne & Hackston, 1996; Suttipun & Yordudom, 2022). High-profile industries have a greater environmental impact due to emissions and varying environmental effects for maning companies, such as biodiversity, land, water, and dust. This results in differences in environmental disclosure.

Second, rule 16/SEOJK.04/2021 has significantly impacted environmental disclosure, as per neo-institutional theory. This indicates that government regulations can significantly influence companies' actions to enhance their environmental disclosure. The study shows that governments, regulators, and standard makers are implementing effective regulations to enhance sustainability, including warning companies for environmental negligence to prevent social conflict.

Although hypotheses 1 and 2 are accepted, this study has limitations. First, the main data analysis only uses the Kruskal-Wallis Test and the Wilcoxon Signed Ranks Test. Future research should improve the model by using different test tools such as MANCOVA. Secondly, the industrial types tested are limited to only three types. Future research should add other types of industry, such as transportation, construction, and hotel sectors.

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